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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,142	01/27/2004	Raja Banerjee	03-16	1947
30699	7590	01/24/2007		
DAYCO PRODUCTS, LLC 1 PRESTIGE PLACE MIAMISBURG, OH 45342			EXAMINER RIVELL, JOHN A	
			ART UNIT 3753	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/766,142	BANERJEE ET AL.	
	Examiner	Art Unit	
	John Rivell	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/26/06 (amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-13 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13 and 21-25 is/are allowed.
- 6) ☒ Claim(s) 5-8 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments filed October 26, 2006, concerning claims 5-8 and 18-20 have been fully considered but they are not persuasive.

Claims 1-4 and 14-17 have been canceled. Claims 5-13 and 18-25 remain pending.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fieldler et al. in view of Yamazaki et al.

The patent to Fieldler et al. discloses a "fuel fill system comprising: a funnel (2) having an inlet port (at 19) configured to receive a nozzle (13) from an external fuel source; a fuel filler tube (3) coupled to an outlet port (downstream of indentation 24) of the funnel (2); and a vapor recirculation tube (9) coupled to the funnel (2), wherein fuel vapor from the vapor recirculation tube (9) enters the funnel (2) through a fuel vapor port,... wherein the funnel (2) includes a cylindrical portion (4) through which the fuel vapor port is disposed, the fuel vapor port has a centerline... and wherein, in a plane perpendicular to a longitudinal axis of the funnel (as illustrated in figure 3) the fuel vapor port further directs fuel vapor at a second angle less than 90° from a line tangent to an

inner surface of the funnel at a point where fuel vapor enters the funnel” as recited in claim 5, and the fuel vapor port directs the fuel vapor toward the outlet port” to the left of numeral 22' as recited in claim 5.

Thus the patent to Fieldler et al. discloses all the claimed features with the exception of having “the fuel vapor port (having) a centerline disposed at a first angle less than 90° from a longitudinal axis of the cylindrical portion” such that the “fuel vapor port directs the fuel vapor toward the outlet port” connected to neck 3.

The patent to Yamazaki et al. discloses that it is known in the art to employ a vapor recirculation tube (27₃) coupled to the funnel (22a'), wherein fuel vapor from the vapor recirculation tube (27₃) enters the funnel (22a') through a fuel vapor port, and the fuel vapor port directs the fuel vapor toward the outlet port” to the left of numeral 22' for the purpose of conducting fuel vapor exhausted from the fuel tank during refueling into the filler neck to be entrained by, and mixed with, the liquid fuel entering the fuel funnel for return to the fuel tank precluding potentially hazardous fuel vapor leakage to the atmosphere.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Fieldler et al. a fuel vapor port, at the end of vapor recirculation tube 9 which is connected to funnel 2, so located such that fuel vapor is directed toward the outlet of the funnel for the purpose of conducting fuel vapor exhausted from the fuel tank during refueling into the filler neck to be entrained by, and mixed with, the liquid fuel entering the fuel funnel for return to the fuel tank precluding potentially hazardous fuel vapor leakage to the atmosphere as recognized by Yamazaki et al.

Regarding claim 6, in Fieldler et al., “the fuel vapor port (at the end of tube 9 connected to funnel 2) has a centerline disposed at the second angle” as recited.

Regarding claims 7 and 8, on thorough review of figure 3 of Fieldler et al., "the second angle is between about 20° to about 70°" and "is between about 30° to about 60°" as recited.

Regarding claim 18, Fieldler et al. discloses a "funnel (2) for a fuel fill system, the funnel (2) comprising: an inlet port (19) configured to receive a nozzle (13) from an external fuel source; an outlet port through which fuel from the nozzle (13) passes to a fuel filler tube (3); and a fuel vapor port (at the end of recirculation tube 9) configured to direct fuel vapor entering the funnel (2) towards... wherein the fuel vapor port has a centerline disposed at a first angle less than 90° from a longitudinal axis of the funnel (2); and wherein the fuel vapor port is further configured to direct the fuel vapor entering the funnel (2) at a second angle less than 90° from a line tangent to an inner surface of the funnel (2) at a point where the fuel vapor enters the funnel (2), the angle being in a plane perpendicular to the longitudinal axis of the funnel"

Thus the patent to Fieldler et al. discloses all the claimed features with the exception of having "the fuel vapor port (having) a centerline disposed at a first angle less than 90° from a longitudinal axis of the cylindrical portion" such that the "fuel vapor port directs the fuel vapor toward the outlet port" connected to neck 3.

The patent to Yamazaki et al. discloses that it is known in the art to employ a vapor recirculation tube (27₃) coupled to the funnel (22a'), wherein fuel vapor from the vapor recirculation tube (27₃) enters the funnel (22a') through a fuel vapor port, and the fuel vapor port directs the fuel vapor toward the outlet port" to the left of numeral 22' for the purpose of conducting fuel vapor exhausted from the fuel tank during refueling into the filler neck to be entrained by, and mixed with, the liquid fuel entering the fuel funnel for return to the fuel tank precluding potentially hazardous fuel vapor leakage to the atmosphere.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Fieldler et al. a fuel vapor port, at the end of vapor recirculation tube 9 which is connected to funnel 2, so located such that fuel vapor is directed toward the outlet of the funnel for the purpose of conducting fuel vapor exhausted from the fuel tank during refueling into the filler neck to be entrained by, and mixed with, the liquid fuel entering the fuel funnel for return to the fuel tank precluding potentially hazardous fuel vapor leakage to the atmosphere as recognized by Yamazaki et al.

Regarding claims 19 and 20, on thorough review of figure 3 of Fieldler et al., "the second angle is between about 20° to about 70°" and "is between about 30° to about 60°" as recited.

Regarding applicants remarks concerning the above, the arguments are unpersuasive for at least two reasons.

First, applicant argues that if so combined, one would have to look at the vent tube 55 of Yamazaki et al. for potential combinations with vent tube 9 of Fiedler et al. Such is not believed correct as the tube 55 of Yamazaki et al. directs fluid pressure to a spring chamber 51 of a vapor vent control valve V controlling the flow of fuel vapor to the canister C. Such connection allows the valve V to operate to open as fuel vapor pressure from fuel tank T is applied to diaphragm 49. See figs. 7-9. Fuel vapor, if within tube 55, is thus precluded from "venting" anywhere via tube 55.

Secondly, applicant essentially argues that the proposed combination "would have destroyed the functionality of the Fiedler et al. vent tube (and thus) teaches away from the... proposed combination".

It is recognized that modification of the vent tube 9 of Fiedler et al., by reorienting the direction in a manner as taught by Yamazaki et al. "destroys" or eliminates the

function of venting of fuel vapor to the atmosphere as taught by Fiedler et al. However, this is what is taught by Yamazaki et al. In Yamazaki et al. the orientation of the fuel vapor recirculation tube 27₃ is such that fuel vapor, exhausted from the fuel tank T during liquid filling of the tank T, is directed back into the tank via the filler neck, along with liquid fuel, to suppress the venting of fuel vapor directly to the atmosphere during refueling (see the Field of Invention, column 1 of Yamazaki et al.).

Clearly the prior art, here Yamazaki et al. suggests the modification by the desire to suppress the release of fuel vapor to the atmosphere. As applied to Fiedler et al. one may lose the functionality of venting fuel vapor directly to atmosphere. Given the potential flammability and the toxicity of fuel vapor *per se*, it appears to be advantageous in all respects to preclude or at least minimize the direct to atmosphere venting of fuel vapor during refueling of a fuel tank to at least minimize the risk of fire and/or potential health hazards to those operators within the area of the refueling neck during refueling.

Additionally, while, "each of the rejected claims, including independent claims 5 and 18, are directed to a fuel fill system in which fuel vapor is directed at an angle in the funnel to generate a swirl component" as disclosed, since the claim language fails to elicit a "swirl component" this argument is moot.

Claims 9-13 and 21-25 allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not


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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Rivell
Primary Examiner
Art Unit 3753

j.r.